REMARKS

Administrative Overview

Claims 1-40 were presented in the original application, which was filed December 4, 2000. The Office action dated October 21, 2003, rejects claims 1-4, 6, 17, 21-24, and 26 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,963,212 (*Bakalash*). The Office action rejects claims 5, 7, 13-16, 18-20, 25, 27, 30, 31, 33-36, and 38-40 under 35 U.S.C. § 103(a) as being unpatentable over *Bakalash* in view of U.S. Patent No. 6,608,631 (*Milliron*). The Office action rejects claims 12 and 32 under 35 U.S.C. § 103(a) as being unpatentable over *Bakalash* in view of U.S. Patent No. 5,973,678 (*Stewart et al.*). Finally, claims 8-11 and 28-31 are objected to as being dependent on a rejected base claim.

Applicant thanks Examiner Nguyen for her discussion with Applicant's undersigned representative by telephone on January 9, 2004, regarding the status of claim 37. According to the telephone conversation, Applicant understands claim 37 stands as rejected on the same basis as claim 17.

Original Independent Claims 1 and 21 are Patentable Over *Bakalash*

Claims 1 and 21 stand rejected under 35 U.S.C. § 103(a) as being obvious over *Bakalash*. Applicant respectfully traverses both rejections.

Claim 1 is drawn to a method of calculating a modification of a geometrical shape. Applicant respectfully traverses the rejection of claim 1 for at least two reasons.

First, *Bakalash* does not teach or suggest the step in claim 1 of "selecting a modification function that represents a desired modification to be applied to [a] geometrical shape [emphasis added]."

The Office action states on page 2 that *Bakalash* discloses "selecting a modification function (skewing function) to be applied to the geometrical shape."

However, the "linear periodic skewing function" cited in *Bakalash* (col. 12, lines 28-32; figs. 2 and 3) is not related to the modification of a geometrical shape. Rather, the skewing function is related to mapping a memory storage element in C^3 space into a physical memory storage element in M^3 space. There is no teaching or suggestion in *Bakalash* that a skewing function could be applied to modify a geometrical shape.

Second, Bakalash does not teach or suggest the steps in claim 1 of "applying an inverse function of the modification function to [an] array of values to produce a modified array," and "deducing from the modified array a modification of the geometrical shape that would result from a direct application of the modification function to the array."

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The Office action states on page 2, "*Bakalash* does not teach deducing from the modified array [a modification of the geometrical shape] that would result from direct application [of the modification function]; however, ...[at col. 13, lines 42-52 and fig. 3] *Bakalash* shows a direct application of skewing function of the modification. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made ... to provide a direct application of the modification [of the geometrical shape] ...[emphasis added]"

Applicant contends that this argument does not speak to the "deducing" step of claim 1, "deducing from the modified array a modification of the geometrical shape that would result from a direct application of the modification function to the array," because *Bakalash* does not teach or suggest applying an inverse function to produce a modified array.

Claim 1 does not require a direct application of the modification function; rather, the method of claim 1 comprises applying an inverse function to produce a modified array, and deducing from the modified array a modification of the geometrical shape that would result from a direct application of the modification function. For example, an embodiment of the invention is directed to a method of inferring a modification of a geometrical shape by applying an inverse of the corresponding modification function to an array of values instead of directly applying the modification function.

Bakalash does not teach or suggest the "deducing" step of claim 1 because *Bakalash* does not apply an inverse function to produce a modified array, which is then used in the deducing step. On the contrary, the Office action states in item 3 on page 3 that *Bakalash* teaches "a direct application of [a] skewing function...[emphasis added]" to map a memory storage element in C^3 space into a physical memory storage element in M^3 space. As the Office action points out, *Bakalash* discloses "deskewing functions," at col. 12, line 42, but these simply map from M^3 space back into C^3 space. The deskewing functions are not used to infer a direct application of a skewing function.

Furthermore, as discussed above, the skewing and deskewing functions in *Bakalash* are not related to the modification of a geometrical shape. They are related to memory storage mapping.

Therefore, on the basis of the above arguments, Bakalash does not teach or suggest each limitation of claim 1. Since fewer than all of the claim limitations of claim 1 are taught or suggested by the cited art, Applicants respectfully request that the rejection of claim 1 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Claim 21 is drawn to a system for calculating a modification of a geometrical shape. The system includes modules that perform steps analogous to the steps of claim 1. For the reasons presented above with regard to claim 1, Applicant respectfully submits that Bakalash does not teach, suggest, or motivate every limitation of claim 21. Since fewer than all of the claim limitations of claim 21 are taught or suggested by the cited art,

Applicant respectfully requests that the rejection of claim 21 under 35 U.S.C. § 103(a) be reconsidered and withdrawn, as well.

Original Dependent Claims 2-4, 6, 17, 22-24, 26 and 37 are Each Patentable Over *Bakalash*

Dependent claims 2-4, 6, 17, 22-24, 26 and 37 stand rejected under 35 U.S.C. § 103(a) as being obvious over *Bakalash*. Applicant respectfully traverses this rejection.

Each of the dependent claims 2-4, 6, 17, 22-24, 26 and 37 depends from either claim 1 or claim 21 and contains all the limitations therein. As discussed above, claims 1 and 21 are patentable over *Bakalash*. Therefore, Applicant respectfully submits that dependent claims 2-4, 6, 17, 22-24, 26 and 37 are patentable over *Bakalash*. Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claims 2-4, 6, 17, 22-24, 26 and 37.

Original Dependent Claims 5, 7, 13-16, 18-20, 25, 27, 30, 31, 33-36, and 38-40 are Each Patentable Over *Bakalash* in view of *Milliron*

Dependent claims 5, 7, 13-16, 18-20, 25, 27, 30, 31, 33-36 and 38-40 stand rejected under 35 U.S.C. § 103(a) as being obvious over *Bakalash* in view of *Milliron*. Applicant respectfully traverses these rejections.

Each of dependent claims 5, 7, 13-16, 18-20, 25, 27, 30, 31, 33-36 and 38-40 depends from either claim 1 or claim 21 and contains all the limitations therein. As discussed above, claims 1 and 21 are patentable over the cited art. Therefore, Applicant respectfully submits that dependent claims 5, 7, 13-16, 18-20, 25, 27, 30, 31, 33-36 and 38-40 are patentable over *Bakalash* in view of *Milliron*, at least on this basis. Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claims 5, 7, 13-16, 18-20, 25, 27, 30, 31, 33-36 and 38-40.

Original Dependent Claims 12 and 32 are Each Patentable Over the Cited Art

Dependent claims 12 and 32 stand rejected under 35 U.S.C. § 103(a) as being obvious over *Bakalash* in view of *Stewart et al.* Applicant respectfully traverses these rejections.

Claims 12 and 32 depend from independent claims 1 and 21, respectively. Thus, claims 12 and 32 contain all the limitations of claims 1 and 21, respectively. As discussed above, claims 1 and 21 are patentable over the cited art. Therefore, Applicant respectfully submits that dependent claims 1 and 21 are patentable over *Bakalash* in view of *Stewart et al.*, at least on this basis. Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claims 12 and 32.

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<u>Original Dependent Claims 8-11 and 28-31</u>

The Office action states on page 6, item 6, that Claims 8-11 and 28-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In accordance with 37 CFR 1.111(b), Applicant requests that these objections as to form not necessary to further consideration of the claims be held in abeyance until allowable subject matter, specifically with respect to claims 1, 7, 21, and 27, is indicated.
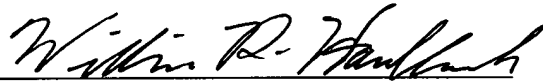
<u>Conclusion</u>

Applicant requests that the Examiner reconsider the Application and claims in light of the foregoing Response. Applicant respectfully submits that all of claims 1-40 are in condition for allowance. If the Examiner believes that it would be helpful to discuss any aspect of the Application by telephone, the undersigned representative invites the Examiner to call at the telephone number given below.

Respectfully submitted,

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